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Silicon beam telescope for CMS SLHC detector studies (SiBT)

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The silicon strip detector based beam telescope, the SiBT, was upgraded in spring 2007 using DAQ components from the CMS Tracker module testing and Fermilab D0 RunIIb silicon strip sensors from Hamamatsu. The interpolated position resolution of the telescope is 9 μ m, it has a S/N of 25 and an active area of 4 x 4 cm2. The telescope contains 8 reference detector planes in ±45 degree orientation and has two slots in the middle of the telescope for the devices to be tested. The telescope can be cooled down to -20°C temperature. In June and August 2007 the telescope was used for studying full-size AC-coupled strip detectors made of n-type magnetic Czochralski silicon.

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